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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,764	04/09/2004	Donald DeMotte	16676	1442
50659 7590 01/31/2007 BUTZEL LONG STONERIDGE WEST 41000 WOODWARD AVENUE BLOOMFIELD HILLS, MI 48304			EXAMINER TRAN, KHOI H	
			ART UNIT	PAPER NUMBER
			3651	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/31/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/821,764

Applicant(s)

DEMOTTE ET AL.

Examiner

Khoi H. Tran

Art Unit

3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 3-8 and 13-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 9-12, 19, and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

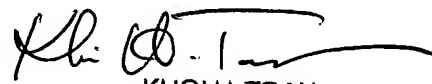
Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


KHOI H. TRAN

PRIMARY EXAMINER

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 9-12, 19, and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Huang et al. 6,286,656.

Huang et al. '656 disclose method for stacking cases on a pallet per claimed invention. The method comprises the steps of: supplying cases to a buffer 16 in a random order (at least column 8, second full paragraph); defining stacking rules or stacking principles for selecting cases from the buffer to be placed on respective pallet; organizing the rules in a predetermined order (at least Figure 3); determining physical characteristics of cases in the buffer including dimensions of a case base and case height; determining available locations on the pallet where a case in the buffer can be placed (at least column 8, lines 33-67, Figure 4); using physical characteristics of cases in the buffer and applying the stacking rules to at least a portion of the buffer cases;

identifying a selected buffer case that satisfies at least one of the rules and a corresponding position on the pallet for the selected case; and using an industrial robot 17 (Figure 1) to place the selected case on the pallet at the corresponding position. It is at least obvious, if not inherent, that at least for the first few packages to be placed on Huang et al. '656 pallet, the cases that instantly met the rules do not need to be reordered and are placed on the pallet before the identification of a subsequent case.

Huang et al. '656 method further comprises reapplying the previously determined stacking principle (i.e. corner-fit) before applying another stacking principle to a buffer case (i.e. stability-fit).

Huang et al. '656 comprises method step of determining available positions on the pallet by continually updating available regions on the pallet where a buffer case can be placed as cases are placed on the pallet. Huang et al. '656 continually replenishes the buffer 20 with cases after a buffer case is placed on the pallet.

Huang et al. '656 method comprises applying the stacking rules sequentially in a variable prioritized order (i.e. corner-fit first and stability-fit) to at least a portion of the buffer cases and the available locations.

Huang et al. '656 method comprises repeatedly applying the rules in a variable prioritized order to the buffer cases, repeatedly selecting for placement on the pallet a case that satisfies a stacking rule, repeatedly placing each case on the pallet in the corresponding location until the platform is filled with cases, supplying an unfilled pallet 11, and continually replenishing the buffer 16 with cases after a buffer case is placed on the pallet.

Huang et al. '656 comprises identifying physical characteristics of at least one case in the pallet including the case height, identifying one of the pallet cases having a case height equal to a case height of a selected buffer case and a corresponding position adjacent the one pallet case for the selected case, and using an industrial robot to place the selected case on the pallet.

4. Claims 1, 2, 9-12, 19, and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Van Durrett et al. 5,501,571.

Van Durrett et al. '571 disclose a method for stacking cases on a pallet per claimed invention. The method comprises the steps of: supplying cases to a buffer 20 in a random order (column 1, lines 30-45); defining rules for selecting cases from the buffer 20 to be placed on respective pallet (full layer rule, height/weight rules for stability, and/or exception case rule); determining physical characteristics of cases in the buffer including dimensions of a case base and case height; determining available locations on the pallet where a case in the buffer can be placed (Figures 7-24); using physical characteristics of cases in the buffer and applying the rules to at least a portion of the buffer cases; identifying a selected buffer case that satisfies at least one of the rules and a corresponding position on the pallet for the selected case; and using an industrial robot 90 to place the selected case on the pallet at the corresponding position (Figures 7-24). It is at least obvious, if not inherent, that at least for the first few packages to be placed on Van Durrett et al. '571 pallet, the cases that instantly met the

rules do not need to be reordered and are placed on the pallet before the identification of a subsequent case.

In regards to claim 2, Van Durrett et al. '571 method further comprises reapplying the previously determined rule (i.e. weight rule control loop) before applying another rule to a buffer case.

In regards to claim 9, Van Durrett et al. '571 method step of determining available positions on the pallet further comprises continually updating available regions on the pallet where a buffer case can be placed as cases are placed on the pallet; and continually replenishing the buffer 20 with cases after a buffer case is placed on the pallet (Figure 1A).

In regards to claim 10, Van Durrett et al. '571 method further comprises applying the rules sequentially in a variable prioritized order (i.e. heavy cases first) to at least a portion of the buffer cases and the available locations.

In regards to claim 11, Van Durrett et al. '571 method further comprises repeatedly applying the rules in a variable prioritized order to the buffer cases; repeatedly selecting for placement on the pallet a case that satisfies a rule; and repeatedly placing each case on the pallet in the corresponding location until the platform is filled with cases; supplying an unfilled pallet 99; and continually replenishing the buffer 20 with cases after a buffer case is placed on the pallet (Figure 1A).

In regards to claim 12, Van Durrett et al. '571 method further comprises reapplying the previously determined rule (i.e. weight rule control loop) before applying another rule to a buffer case.

In regards to claim 19, Van Durrett et al. '571 method step of determining available positions on the pallet further comprises continually updating available regions on the pallet where a buffer case can be placed as cases are placed on the pallet.

In regards to claim 20, Van Durrett et al. '571 method further comprises determining physical characteristics of at least one case in the pallet including known case height (height dimension of the case as it is being loaded on the pallet and the maximum allowable height for each layer of cases on the pallet); identifying a pallet cases having a case height equal to a case height of a selected buffer case and a corresponding position adjacent the one pallet case for the selected case; and using an industrial robot to place the selected case on the pallet (Figures 15, 21).

Response to Arguments

5. Applicant's arguments filed 11/28/2006 have been fully considered but they are not persuasive.

Applicant argued that Huang et al. 6,286,656 does not anticipate the claimed invention because it uses only one rule for the placement of packages on the pallet. Applicant argued that the stability criterion for the placement of packages is not a rule, but instead, a qualification for the current single rule. These arguments are not persuasive. Since Applicant has failed to define distinct characteristics for the plurality of claimed rules, any criteria or qualifications for determining the placement of Huang et al. '626 packages are interpreted to be rules. Each logic step for determining the placement of Huang et al. '656 packages is considered a logic rule. Huang et al. '626

comprises plurality of rules, organized in a predetermined order, for determining the placement of packages in accordance to any one of the rules.

Applicant argued that Van Durett et al. 5,501,571 do not anticipate the instant claims because the claimed invention do not reorder cases on the conveyor per Van Durett et al. '571. This argument is not persuasive. Van Durett et al. '571 still anticipate the claims per the rejection in paragraph 4 above.

Applicant argued that decision blocks and various partition plans in Van Durett et al. '571 do not correspond to a configurable set of rules per Applicant's claimed invention. This argument is not persuasive. It is the Office's position that Van Durett et al. '571 method of choosing locations for a box per various partitions plans are interpreted as configurable rules. Please note that as each decision is being made, it would have to abide by a set of rule. Applicant's claim language does not provide any specific distinction among the claimed rules and those of Van Durett et al. '571.

Applicant argued that Van Durett et al. '571 decisions (according to rules) are fixed and not "configurable". This argument is not persuasive. Applicant's claim language does not provide specific support for this argument.

Conclusion

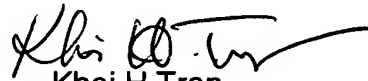
6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khoi H. Tran whose telephone number is (571) 272-6919. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Khoi H Tran
Primary Examiner
Art Unit 3651

KHT
01/23/2007